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RHIZOPODS OF OAKLAND CO., MICH.

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The list of species which I present in this paper is the result of two or three years' desultory observations, and, of course, cannot be considered an exhaustive one, of the Rhizopods of Oakland county. The localities I have examined comprise chiefly the numerous lakes, ponds, and streams in the vicinity of Pontiac, and sphagnum and algæ growing in swamps and other cool and shaded localities. As a rule, I have found Rhizopods most abundant in sphagnum from well-shaded situations, although the largest number and greatest variety of Rhizopods I ever observed in a single gathering was from Clinton river, among the fine thread-like roots of the willow. I find their habits substantially as described by Professor Leidy in his monograph on the Rhizopods of the United States, which has been my chief authority in classifying the species I have found. I have noted, however, that many species, including *Amæba*, are not so active and voracious as those described by Professor Leidy, it being quite rare to find one containing a diatom or a desmid, while many figured in his work are filled with colored food-balls and vegetable particles.

I have observed the following species :

Amœba proteus } —common.
 “ *radiosa* }

Ouramœba vorax—occasional.

Dinamœba mirabilis—in sphag., rare.

Diffugia pyriformis }
 “ *urciolata* } —common.
 “ *acuminata* }
 “ *globulosa* }
 “ *constricta* }

“ *corona* } —occasional.
 “ *lobostoma* }

“ *spiralis*—abundant in a single gathering (sphagnum).

Arcella vulgaris } —very common.
 “ *discoides* }

“ *dentata*—occasional.

“ *mitrata*—rare.

Euglypha alveolata } —common in sphagnum.
 “ *ciliata* }

“ *cristata*—rare.

Cyphoderia ampulla—common in one or two localities.

Campascus cornutus—a single characteristic specimen observed.

Described by Leidy in *Rhizopods of the United States* and found by him only in China Lake, Uinta Mountains, Wyoming.

Centropyxis aculeata—very common.

Trinema enchelys—common in sphag.

Clathrulina elegans—not uncommon.

Vampyrella lateritia—very abundant in a bottle w. *œdagonium* in my laboratory, rare elsewhere.

Hyalosphenia elegans—rare in sphagnum.

Actinosphærium eichhornii—common.

Actinophrys sol—very common.

Pseudodifflugia gracilis—in sphag., rare.

Acanthocystis }
Radiophrys } —occasional.
Heterophrys }

Rhizopods are, of course, best studied alive; but the testaceus forms, and even the soft, unprotected varieties, may be mounted so as to display very well many of the characteristics of the species. As the specimens are rarely sufficiently abundant to warrant the treatment by levigation, that so facilitates the separation of the foraminifera and diatoms, it is better to pick them out singly with a small camel's-hair brush under a dissecting microscope and transfer them to a drop of glycerine, where they may remain without change until required for mounting. Occasionally, when a certain variety is very abundant, the isolation of the forms may be facilitated by carefully washing the material and finally transferring the specimens singly, each variety to its own slide. For most species I have found glycerine jelly to be the most suitable medium for mounting, as the specimens do not become too transparent, do not change their position on the slide as in a fluid, and may be transferred directly from the glycerine. The sarcode also is preserved, though of course somewhat contracted and with the pseudopods withdrawn. Some

very transparent varieties, like Englypha, become almost invisible in glycerine jelly. These I mount either in some aqueous medium or, still better, in CS_2 or other medium of high refractive index, in which the beautiful plated structure of Englypha is very clearly displayed. It has been suggested to me to arrange the shells in some artistic design ; but while in some cases the result would be very pretty, yet many species are so varying and unsymmetrical in form that a strewn slide containing the various varieties and the transitional forms would be easier of preparation and of much more scientific value.

ERRATA.

Page 96, lines 1 and 4, for "Englypha," read Euglypha.

Page 124, line 3 from bottom, for "Whitall and Tatam," read Whitall and Tatum.

Page 165, foot-note, for "Aganoid," read A. ganoid.

Page 243, line 29, for "page 247," read page 250.